The Journal of Infectious Diseases

Volume 185 · Number 1 1 January 2002

MAJOR ARTICLES

1 **Plasmid DNA Immunization against Japanese Encephalitis Virus: Immunogenicity of Membrane-Anchored and Secretory Envelope Protein**
Rupinderjeet Kaur, Geetanjali Sachdeva, and Sudhanshu Vrati

13 **Altered Synthesis of Interleukin-12 and Type 1 and Type 2 Cytokines in Rhesus Macaques during Measles and Atypical Measles**
Fernando P. Polack, Scott J. Hoffman, William J. Moss, and Diane E. Griffin

20 **High Incidence of Ganciclovir-Resistant Cytomegalovirus Infection among Lung Transplant Recipients Receiving Preemptive Therapy**
Ajit P. Limaye, Ganesh Raghu, David M. Koelle, James Ferrenberg, Meei-Li Huang, and Michael Boeckh

28 **Determinants of Cervical Human Papillomavirus Infection: Differences between High- and Low-Oncogenic Risk Types**
Paul K. S. Chan, Alexander R. Chang, Jo L. K. Cheung, Denise P. C. Chan, L. Y. Xu, Nelson L. S. Tang, and Augustine F. Cheng

36 **Search for Polymorphisms in the Genes for Herpesvirus Entry Mediator, Nectin-1, and Nectin-2 in Immune Seronegative Individuals**
Frank Struyf, Christine M. Posavad, Els Keyaerts, Marc Van Ranst, Lawrence Corey, and Patricia G. Spear

45 **Risk of Human Immunodeficiency Virus Infection in Herpes Simplex Virus Type 2–Seropositive Persons: A Meta-analysis**
Anna Wald and Katherine Link

53 **Reconstitution of Spontaneous Neutralizing Antibody Response against Autologous Human Immunodeficiency Virus during Highly Active Antiretroviral Therapy**
Tetsuya Kimura, Kazuhisa Yoshimura, Kumiko Nishihara, Yosuke Maeda, Shintaro Matsumi, Atsushi Koito, and Shuzo Matsushita

61 **Pilot Study of the Effects of Intermittent Interleukin-2 on Human Immunodeficiency Virus (HIV)–Specific Immune Responses in Patients Treated during Recently Acquired HIV Infection**
Mark Dybul, Bertha Hidalgo, Tae-Wook Chun, Michael Belson, Stephen A. Migueles, Jesse S. Justement, Betsey Herpin, Cheryl Perry, Claire W. Hallahan, Richard T. Davey, Julia A. Metcalf, Mark Connors, and Anthony S. Fauci

69 **Interrelationships among Human Immunodeficiency Virus Type 1 Infection, Bacterial Vaginosis, Trichomoniasis, and the Presence of Yeasts**
Prashini Moodley, Cathy Connolly, and A. Willem Sturm

74 ***Escherichia coli* Harboring Shiga Toxin 2 Gene Variants: Frequency and Association with Clinical Symptoms**
Alexander W. Friedrich, Martina Bielaszewska, Wen-Lan Zhang, Matthias Pulz, Thorsten Kuczius, Andrea Ammon, and Helge Karch

85 **Interaction between Human Polymorphonuclear Leukocytes and Streptococcus milleri Group Bacteria**
Anna Wanahita, Elizabeth A. Goldsmith, Daniel M. Musher, Jill E. Clarridge III, Jose Rubio, Bhuvaneswari Krishnan, and JoAnn Trial

91 **The Role of Interferon-γ in Murine Pneumococcal Pneumonia**
Anita W. Rijneveld, Fanny N. Lauw, Marc J. Schultz, Sandrine Florquin, Anje A. Te Velde, Peter Speelman, Sander J. H. Van Deventer, and Tom Van Der Poll

98 **Clinical and Immunologic Evaluation of 31 Patients with Acute Schistosomiasis mansoni**
Amelia Ribeiro de Jesus, Angela Silva, Luciana B. Santana, Andrea Magalhães, Adriana Almeida de Jesus, Roque Pacheco de Almeida, Marco A. V. Rêgo, Marcelo N. Burattini, Edward J. Pearce, and Edgar M. Carvalho

CONCISE COMMUNICATIONS

106 Tumor Necrosis Factor–α and Interleukin-10 Promoter Polymorphisms in Epstein-Barr Virus–Associated Gastric Carcinoma
Ming-Shiang Wu, Shih-Pei Huang, Yu-Ting Chang, Chia-Tung Shun, Ming-Chu Chang, Ming-Tsan Lin, Hsiu-Po Wang, and Jaw-Town Lin

110 Selective Reactivation of Human Herpesvirus 6 Variant A Occurs in Critically Ill Immunocompetent Hosts
Raymund R. Razonable, Cara Fanning, Robert A. Brown, Mark J. Espy, Antonio Rivero, Jennie Wilson, Walter Kremers, Thomas F. Smith, and Carlos V. Paya

114 Associations between Human Leukocyte Antigens and Nonresponsiveness to Influenza Vaccine
Colin M. Gelder, Rob Lambkin, Keith W. Hart, Douglas Fleming, O. Martin Williams, Mike Bunce, Kenneth I. Welsh, Sara E. Marshall, and John Oxford

118 Methadone Enhances Human Immunodeficiency Virus Infection of Human Immune Cells
Yuan Li, Xu Wang, Sha Tian, Chang-Jiang Guo, Steven D. Douglas, and Wen-Zhe Ho

123 Roles of Interleukin-6 and Macrophage Inflammatory Protein–2 in Pneumolysin-Induced Lung Inflammation in Mice
Anita W. Rijneveld, Germie P. van den Dobbelsteen, Sandrine Florquin, Theodore J. Standiford, Peter Speelman, Loek van Alphen, and Tom van der Poll

127 Immunity to Placental Malaria. III. Impairment of Interleukin (IL)–12, not IL-18, and Interferon-Inducible Protein–10 Responses in the Placental Intervillous Blood of Human Immunodeficiency Virus/Malaria–Coinfected Women
Sujittra Chaisavaneeyakorn, Julie M. Moore, Juliana Otieno, Sansanee C. Chaiyaroj, Douglas J. Perkins, Ya Ping Shi, Bernard L. Nahlen, Altaf A. Lal, and Venkatachalam Udhayakumar

Volume 185 · Number 2 **15 January 2002**

MAJOR ARTICLES

133 A Predominant Role for Norwalk-like Viruses as Agents of Epidemic Gastroenteritis in Maryland Nursing Homes for the Elderly
Kim Y. Green, Gaël Belliot, Jean Lin Taylor, José Valdesuso, Judy F. Lew, Albert Z. Kapikian, and Feng-Ying C. Lin

147 Burden of Interpandemic Influenza in Children Younger than 5 Years: A 25-Year Prospective Study
Kathleen M. Neuzil, Yuwei Zhu, Marie R. Griffin, Kathryn M. Edwards, Juliette M. Thompson, Sharon J. Tollefson, and Peter F. Wright

153 The Hepatitis C Virus (HCV)–Trimera Mouse: A Model for Evaluation of Agents against HCV
Ehud Ilan, Joseph Arazi, Ofer Nussbaum, Arie Zauberman, Rachel Eren, Ido Lubin, Lewis Neville, Ofer Ben-Moshe, Alberto Kischitzky, Amir Litchi, Ido Margalit, Judith Gopher, Samir Mounir, Weizhong Cai, Nili Daudi, Ahamed Eid, Oded Jurim, Abraham Czerniak, Eithan Galun, and Shlomo Dagan

162 Cytomegalovirus UL97 Phosphotransferase Mutations That Affect Susceptibility to Ganciclovir
Sunwen Chou, Rachel H. Waldemer, Anne E. Senters, Kevin S. Michels, George W. Kemble, Richard C. Miner, and W. Lawrence Drew

170 The Menstrual Cycle Does Not Affect Human Immunodeficiency Virus Type 1 Levels in Vaginal Secretions
Julie M. Villanueva, Tedd V. Ellerbrock, Jeffrey L. Lennox, Timothy J. Bush, Thomas C. Wright, Melody Pratt-Palmore, Tammy Evans-Strickfaden, Lois J. Conley, Cathy Schnell, and Clyde E. Hart

178 A Clinically Prognostic Scoring System for Patients Receiving Highly Active Antiretroviral Therapy: Results from the EuroSIDA Study
Jens D. Lundgren, Amanda Mocroft, Jose M. Gatell, Bruno Ledergerber, Antonella D'Arminio Monforte, Philippe Hermans, Frank-Detlef Goebel, Anders Blaxhult, Ole Kirk, and Andrew N. Phillips, for the EuroSIDA Study Group

188 Antiretroviral Therapy with Protease Inhibitors Has an Early, Immune Reconstitution–Independent Beneficial Effect on *Candida* Virulence and Oral Candidiasis in Human Immunodeficiency Virus–Infected Subjects
Antonio Cassone, Evelina Tacconelli, Flavia De Bernardis, Mario Tumbarello, Antonella Torosantucci, Paola Chiani, and Roberto Cauda

196 Group B Streptococcal β-Hemolysin/Cytolysin Promotes Invasion of Human Lung Epithelial Cells and the Release of Interleukin-8
Kelly S. Doran, Jennifer C. W. Chang, Vivian M. Benoit, Lars Eckmann, and Victor Nizet

204 **Effects of 2 Different Anti–Tumor Necrosis Factor–α Agents in a Primate Model of Subcutaneous Abscess Formation**
Xiao-yu R. Song, Floyd Fox, Mary Ann Gallo, Amy Rosenberg, Robert Jordan, David Shealy, and Carrie Wagner

214 **ABO and P1 Blood Group Antigen Expression and *stx* Genotype and Outcome of Childhood *Escherichia coli* O157:H7 Infections**
Srdjan Jelacic, Cheryl L. Wobbe, Daniel R. Boster, Marcia A. Ciol, Sandra L. Watkins, Phillip I. Tarr, and Ann E. Stapleton

220 **Complement Activation Induced by Purified *Neisseria meningitidis* Lipopolysaccharide (LPS), Outer Membrane Vesicles, Whole Bacteria, and an LPS-Free Mutant**
Anna Bjerre, Berit Brusletto, Tom Eirik Mollnes, Elisabeth Fritzsønn, Einar Rosenqvist, Elisabeth Wedege, Ellen Namork, Peter Kierulf, and Petter Brandtzæg

229 **In Vitro Therapeutic Effect of Epigallocatechin Gallate on Nicotine-Induced Impairment of Resistance to *Legionella pneumophila* Infection of Established MH-S Alveolar Macrophages**
Kazuto Matsunaga, Thomas W. Klein, Herman Friedman, and Yoshimasa Yamamoto

237 **An Outbreak of Travel-Associated Legionnaires Disease and Pontiac Fever: The Need for Enhanced Surveillance of Travel-Associated Legionellosis in the United States**
Andrea L. Benin, Robert F. Benson, Kathryn E. Arnold, Anthony E. Fiore, Patricia G. Cook, L. Keoki Williams, Barry Fields, and Richard E. Besser

244 **Delivery of Exogenous Protein Antigens to Major Histocompatibility Complex Class I Pathway in Cytosol**
Huyen Cao, Deepak Agrawal, Nicholas Kushner, Neal Touzjian, Max Essex, and Yichen Lu

252 **Population-Based Strategies for Outreach Screening of Urogenital *Chlamydia trachomatis* Infections: A Randomized, Controlled Trial**
Berit Andersen, Frede Olesen, Jens K. Møller, and Lars Østergaard

EDITORIAL

259 ***Legionella* Surveillance: Political and Social Implications—A Little Knowledge Is a Dangerous Thing**
Victor L. Yu

CONCISE COMMUNICATION

262 ***Campylobacter* DNA Is Present in Circulating Myelomonocytic Cells of Healthy Persons and in Persons with Guillain-Barré Syndrome**
Ildiko Van Rhijn, Nancy M. C. Bleumink-Pluym, Jos P. M. Van Putten, and Leonard H. Van den Berg

CORRESPONDENCE

266 **The Importance of Assessing Effect Modification When Asserting Racial Differences in Associations between Human Leukocyte Antigen Class II Alleles and Hepatitis C Virus Outcomes**
Olga L. Sarmiento, Chandra L. Ford, Elizabeth C. Newbern, William C. Miller, Charles Poole, and Jay S. Kaufman

267 **Reply**
Chloe L. Thio, Stephen J. O'Brien, and Mary Carrington

268 **Association between Efavirenz and Selected Psychiatric and Neurological Conditions**
Kathleen J. Welch and Anne Morse, for the Adult Spectrum of Disease Project in New Orleans

269 **Children with Cystic Fibrosis Produce an Immune Response against Exoenzyme S, a Type III Cytotoxin of *Pseudomonas aeruginosa***
Bruce Banwart, Mark L. Splaingard, Philip M. Farrell, Michael J. Rock, Peter L. Havens, Joel Moss, Mary E. Ehrmantraut, Dara W. Frank, and Joseph T. Barbieri

270 **Infection with Unusual Types of *Cryptosporidium* Is Not Restricted to Immunocompromised Patients**
Rachel M. Chalmers, Kristin Elwin, Anne L. Thomas, and David H. M. Joynson

Volume 185 · Number 3 1 February 2002

MAJOR ARTICLES

273 High Risk of Death Due to Bacterial and Fungal Infection among Cytomegalovirus (CMV)–Seronegative Recipients of Stem Cell Transplants from Seropositive Donors: Evidence for Indirect Effects of Primary CMV Infection
W. Garrett Nichols, Lawrence Corey, Ted Gooley, Chris Davis, and Michael Boeckh

283 Association between Surfactant Protein A Gene Locus and Severe Respiratory Syncytial Virus Infection in Infants
Johan Löfgren, Mika Rämet, Marjo Renko, Riitta Marttila, and Mikko Hallman

290 Immunoreconstitution in Children Receiving Highly Active Antiretroviral Therapy Depends on the CD4 Cell Percentage at Baseline
Divna Nikolic-Djokic, Shaffiq Essajee, Mona Rigaud, Aditya Kaul, Sulachni Chandwani, William Hoover, Robert Lawrence, Henry Pollack, Yekaterina Sitnitskaya, Stefan Hagmann, Patrick Jean-Philippe, Song He Chen, Jayme Radding, Keith Krasinski, and William Borkowsky

299 Mitochondrial Functionality and Mitochondrial DNA Content in Lymphocytes of Vertically Infected Human Immunodeficiency Virus–Positive Children with Highly Active Antiretroviral Therapy–Related Lipodystrophy
Andrea Cossarizza, Marcello Pinti, Laura Moretti, Dorella Bricalli, Roberta Bianchi, Leonarda Troiano, Maria Garcia Fernandez, Fiorella Balli, Paolo Brambilla, Cristina Mussini, and Alessandra Viganò

306 An Anti-CD45RO Immunotoxin Kills Latently Infected Human Immunodeficiency Virus (HIV) CD4 T Cells in the Blood of HIV-Positive Persons
Jesús Saavedra-Lozano, Cynthia McCoig, Jinbo Xu, Yanying Cao, Philip Keiser, Victor Ghetie, Robert F. Siliciano, Janet D. Siliciano, Louis J. Picker, Octavio Ramilo, and Ellen S. Vitetta

315 $CD4^+$ T Cell Kinetics and Activation in Human Immunodeficiency Virus–Infected Patients Who Remain Viremic Despite Long-Term Treatment with Protease Inhibitor–Based Therapy
Steven G. Deeks, Rebecca Hoh, Robert M. Grant, Terri Wrin, Jason D. Barbour, Amy Narvaez, Denise Cesar, Ken Abe, Mary Beth Hanley, Nicholas S. Hellmann, Christos J. Petropoulos, Joseph M. McCune, and Marc K. Hellerstein

324 Evidence for *Chlamydia trachomatis* as a Human Papillomavirus Cofactor in the Etiology of Invasive Cervical Cancer in Brazil and the Philippines
Jennifer S. Smith, Nubia Muñoz, Rolando Herrero, José Eluf-Neto, Corazon Ngelangel, Silvia Franceschi, F. Xavier Bosch, Jan M. M. Walboomers, and Rosanna W. Peeling

332 *ADAMs* (A Disintegrin and Metalloproteinase) Messenger RNA Expression in *Helicobacter pylori*–Infected, Normal, and Neoplastic Gastric Mucosa
Tetsuro Yoshimura, Toshihiko Tomita, Michael F. Dixon, Anthony T. R. Axon, Philip A. Robinson, and Jean E. Crabtree

341 The Evaluation of Putative Virulence Factors of *Helicobacter pylori* for Gastroduodenal Disease by Use of a Short-Term Mongolian Gerbil Infection Model
Masao Akanuma, Shin Maeda, Keiji Ogura, Yuzo Mitsuno, Yoshihiro Hirata, Tsuneo Ikenoue, Motoyuki Otsuka, Takeshi Watanabe, Yutaka Yamaji, Haruhiko Yoshida, Takao Kawabe, Yasushi Shiratori, and Masao Omata

348 Inhibition of Intracellular Macromolecular Synthesis in *Staphylococcus aureus* by Thrombin-Induced Platelet Microbicidal Proteins
Yan-Qiong Xiong, Arnold S. Bayer, and Michael R. Yeaman

357 Stimulation of Cytokine Release and Adhesion Molecule Expression by Products of Viridans Streptococci
W. P. Hanage and J. Cohen

368 Quantitative Determination of Immunoglobulin G Specific for Group B Streptococcal β C Protein in Human Maternal Serum
Catherine S. Lachenauer, Carol J. Baker, Miriam J. Baron, Dennis L. Kasper, Claudia Gravekamp, and Lawrence C. Madoff

375 **Recurrent Urinary Tract Infections in Infancy: Relapses or Reinfections?**
M. E. Jantunen, H. Saxén, E. Salo, and A. Siitonen

380 **Molecular Markers for Failure of Sulfadoxine-Pyrimethamine and Chlorproguanil-Dapsone Treatment of *Plasmodium falciparum* Malaria**
James G. Kublin, Fraction K. Dzinjalamala, Deborah D. Kamwendo, Elissa M. Malkin, Joseph F. Cortese, Lisa M. Martino, Rabia A. G. Mukadam, Stephen J. Rogerson, Andres G. Lescano, Malcolm E. Molyneux, Peter A. Winstanley, Phillips Chimpeni, Terrie E. Taylor, and Christopher V. Plowe

CONCISE COMMUNICATIONS

389 **Prevalence and Implication of a Newly Identified Infectious Agent (SEN Virus) in Taiwan**
Jia-Horng Kao, Wendy Chen, Pei-Jer Chen, Ming-Yang Lai, and Ding-Shinn Chen

393 **Blood Group and Susceptibility to Disease Caused by *Escherichia coli* O157**
C. Caroline Blackwell, Stephanie Dundas, Valerie S. James, Doris A. C. Mackenzie, Jan M. Braun, Abdulhamid M. Alkout, W. T. Andrew Todd, Robert A. Elton, and Donald M. Weir

397 **Natural and Vaccine-Induced Immunity and Immunologic Memory to *Neisseria meningitidis* Serogroup C in Young Adults**
David Goldblatt, Ray Borrow, and Elizabeth Miller

401 **Molecular Evidence of Endogenous Reactivation of *Mycobacterium tuberculosis* after 33 Years of Latent Infection**
Troels Lillebaek, Asger Dirksen, Inga Baess, Benedicte Strunge, Vibeke Ø. Thomsen, and Åse B. Andersen

CORRESPONDENCE

405 **Levels of Chloroquine Resistance in *Plasmodium falciparum* Are Determined by Loci Other than *pfcrt* and *pfmdr1***
Nanhua Chen, Bruce Russell, Elizabeth Fowler, Jennifer Peters, and Qin Cheng

406 **Reply**
Hamza A. Babiker and David Walliker

Volume 185 · Number 4 15 February 2002

MAJOR ARTICLES

409 **The Role of Donor CD4⁺ T Cells in the Reconstitution of Oral Immunity by Herpes Simplex Virus Type 1 in Severe Combined Immunodeficiency Mice**
Hiroshi Irie, Kiyoshi Aita, A. Hajime Koyama, Akio Fukuda, Takeshi Yoshida, and Junji Shiga

417 **The Origin of Hepatitis C Virus Reinfecting Transplanted Livers: Serum-Derived versus Peripheral Blood Mononuclear Cell–Derived Virus**
Tomasz Laskus, Marek Radkowski, Jeffrey Wilkinson, Hugo Vargas, and Jorge Rakela

422 **Risk Factors and Outcome of Varicella-Zoster Virus Pneumonia in Pregnant Women**
James H. Harger, Joseph M. Ernest, Gary R. Thurnau, Atef Moawad, Valerija Momirova, Mark B. Landon, Richard Paul, Menachem Miodovnik, Mitchell Dombrowski, Baha Sibai, and Peter Van Dorsten, for the National Institute of Child Health and Human Development, Network of Maternal-Fetal Medicine Units

428 **Correlates of Nontransmission in US Women at High Risk of Human Immunodeficiency Virus Type 1 Infection through Sexual Exposure**
Joan H. Skurnick, Paul Palumbo, Anthony DeVico, Barbara L. Shacklett, Fred T. Valentine, Michael Merges, Roberta Kamin-Lewis, Jiri Mestecky, Thomas Denny, George K. Lewis, Joan Lloyd, Robert Praschunus, Amanda Baker, Douglas F. Nixon, Sharon Stranford, Robert Gallo, Sten H. Vermund, and Donald B. Louria

439 **Antibody-Dependent Cell-Mediated Cytotoxicity in Cervical Lavage Fluids of Human Immunodeficiency Virus Type 1–Infected Women**
Kimberly Battle-Miller, Christian A. Eby, Alan L. Landay, Mardge H. Cohen, Beverly E. Sha, and Linda L. Baum

448 **T69D/N *pol* Mutation, Human Immunodeficiency Virus Type 1 RNA Levels, and Syncytium-Inducing Phenotype Are Associated with CD4 Cell Depletion during Didanosine Therapy**
Willscott E. Naugler, Florence H. Yong, Vincent J. Carey, Joan A. Dragavon, Robert W. Coombs, and Lisa M. Frenkel

456 **Antiretroviral Therapy Reduces Markers of Endothelial and Coagulation Activation in Patients Infected with Human Immunodeficiency Virus Type 1**
Katja Wolf, Dimitrios A. Tsakiris, Rainer Weber, Peter Erb, and Manuel Battegay, for the Swiss HIV Cohort Study

463 **Early CD4⁺ T Cell Recovery in Human Immunodeficiency Virus–Infected Patients Receiving Effective Therapy Is Related to a Down-Regulation of Apoptosis and Not to Proliferation**
Pierre-Marie Roger, Jean-Philippe Breittmayer, Jacques Durant, Frédéric Sanderson, Carole Ceppi, Christelle Brignone, Eric Cua, Philippe Clevenbergh, Jean-Gabriel Fuzibet, Alain Pesce, Alain Bernard, and Pierre Dellamonica, for the Groupe d'Études Niçois Polyvalent en Infectiologie (GENPI)

471 **Predictors of Long-Term Increase in CD4⁺ Cell Counts in Human Immunodeficiency Virus–Infected Patients Receiving a Protease Inhibitor–Containing Antiretroviral Regimen**
Vincent Le Moing, Rodolphe Thiébaut, Geneviève Chêne, Catherine Leport, Valérie Cailleton, Christian Michelet, Hervé Fleury, Serge Herson, and François Raffi, for the APROCO Study Group

481 **Risk Factors for the Transmission of Methicillin-Resistant *Staphylococcus aureus* in an Adult Intensive Care Unit: Fitting a Model to the Data**
Hajo Grundmann, Satoshi Hori, Bob Winter, Adriana Tami, and Daren J. Austin

489 **Inhibition of Pneumococcal Carriage in Mice by Subcutaneous Immunization with Peptides from the Common Surface Protein Pneumococcal Surface Adhesin A**
Scott E. Johnson, Janet K. Dykes, Danny L. Jue, Jaquelyn S. Sampson, George M. Carlone, and Edwin W. Ades

497 **Prevalence of Enteric Pathogens among International Travelers with Diarrhea Acquired in Kenya (Mombasa), India (Goa), or Jamaica (Montego Bay)**
Zhi-Dong Jiang, Brett Lowe, M. P. Verenkar, David Ashley, Robert Steffen, Nadia Tornieporth, Frank von Sonnenburg, Peter Waiyaki, and Herbert L. DuPont

503 **Lewis Antigen Expression and Other Pathogenic Factors in the Presence of Atrophic Chronic Gastritis in a European Population**
Nathalie Broutet, Anthony Moran, Sean Hynes, Charlotte Sakarovitch, and Francis Mégraud, for the Eurohepygast Study Group

513 **Differential T and B Cell Responses against *Mycobacterium tuberculosis* Heparin-Binding Hemagglutinin Adhesin in Infected Healthy Individuals and Patients with Tuberculosis**
Chantal Masungi, Stéphane Temmerman, Jean-Paul Van Vooren, Annie Drowart, Kevin Pethe, Franco D. Menozzi, Camille Locht, and Françoise Mascart

521 **Essential Role of the *Candida albicans* Transglutaminase Substrate, Hyphal Wall Protein 1, in Lethal Oroesophageal Candidiasis in Immunodeficient Mice**
Paula Sundstrom, Edward Balish, and Carl M. Allen

531 **Triggering of Innate Immune Responses by Schistosome Egg Glycolipids and Their Carbohydrate Epitope GalNAcβ1-4(Fucα1-2Fucα1-3)GlcNAc**
Desiree Van der Kleij, Alexandra Van Remoortere, Joost H. N. Schuitemaker, Martien L. Kapsenberg, Andre M. Deelder, Aloysius G. M. Tielens, Cornelus H. Hokke, and Maria Yazdanbakhsh

CONCISE COMMUNICATIONS

540 **Rhinovirus Infection Increases 5-Lipoxygenase and Cyclooxygenase-2 in Bronchial Biopsy Specimens from Nonatopic Subjects**
Michelle L. Seymour, Natalie Gilby, Philip G. Bardin, David J. Fraenkel, Gwendolyn Sanderson, John F. Penrose, Stephen T. Holgate, Sebastian L. Johnston, and Anthony P. Sampson

545 **Persons with Early Syphilis Identified through Blood or Plasma Donation Screening in the United States**
Carolyn Gardella, Anthony A. Marfin, Richard H. Kahn, Emmett Swint, and Lauri E. Markowitz

550 **Ferrets as a Model System for Renal Disease Secondary to Intestinal Infection with *Escherichia coli* O157:H7 and Other Shiga Toxin–Producing *E. coli***
Jon B. Woods, Clare K. Schmitt, Stephen C. Darnell, Karen C. Meysick, and Alison D. O'Brien

555 **Temporal Sequence and Functional Implications of Vβ-Specific T Cell Receptor Down-regulation and Costimulatory Molecule Expression following In Vitro Stimulation with the Staphylococcal Superantigen Toxic Shock Syndrome Toxin–1**
Winnie W. S. Kum, Ryan W. Y. Hung, Scott B. Cameron, and Anthony W. Chow

561 **Restricting the Selection of Antibiotic-Resistant Mutant Bacteria: Measurement and Potential Use of the Mutant Selection Window**
Xilin Zhao and Karl Drlica

Volume 185 · Supplement 1 **15 February 2002**

i **Introduction**

S1 **The Study of *Mycobacterium leprae* Infection in Interferon-γ Gene–Disrupted Mice as a Model to Explore the Immunopathologic Spectrum of Leprosy**
Linda B. Adams, David M. Scollard, Nashone A. Ray, Andrea M. Cooper, Anthony A. Frank, Ian M. Orme, and James L. Krahenbuhl

S9 **Infection and Nitric Oxide**
John B. Hibbs Jr.

S18 ***Listeria monocytogenes:* Clinical and Experimental Update**
Edward J. Wing, and Stephen H. Gregory

S25 **The Shikimate Pathway and Its Branches in Apicomplexan Parasites**
Craig W. Roberts, Fiona Roberts, Russell E. Lyons, Michael J. Kirisits, Ernest J Mui, John Finnerty, Jennifer J. Johnson, David J. P. Ferguson, John R. Coggins, Tino Krell, Graham H. Coombs, Wilbur K. Milhous, Dennis E. Kyle, Saul Tzipori, John Barnwell, John B. Dame, Jane Carlton, and Rima McLeod

S37 **Epigenetic Regulation of T Cell Fate and Function**
Christopher B. Wilson, Karen W. Makar, and Mercedes Pérez-Melgosa

S46 **Approaches toward the Directed Design of a Vaccine against *Borrelia burgdorferi***
Benjamin J. Luft, John J. Dunn, and Catherine L. Lawson

S52 **Biotechnology and Clinical Trials**
Jay P. Siegel

S58 **Host Resistance in the Brain against *Toxoplasma gondii***
Yasuhiro Suzuki

S66 **Suppression of NF-κB Activation by Infection with *Toxoplasma gondii***
S. Shapira, K. Speirs, A. Gerstein, J. Caamano, and C. A. Hunter

S73 **Laboratory Diagnosis of *Toxoplasma gondii* Infection and Toxoplasmosis**
Jose G. Montoya

S83 **CD154 and Type-1 Cytokine Response: From Hyper IgM Syndrome to Human Immunodeficiency Virus Infection**
Carlos S. Subauste

S90 **Protective Effects of Immunization with a Recombinant Cyst Antigen in Mouse Models of Infection with *Toxoplasma gondii* Tissue Cysts**
Stephen Parmley, Teri Slifer, and Fausto Araujo

S96 **Oral Infection of C57BL/6 Mice with *Toxoplasma gondii:* A New Model of Inflammatory Bowel Disease?**
Oliver Liesenfeld

Volume 185 · Number 5 1 March 2002

MAJOR ARTICLES

567 Maternal Drug Use Is a Preeminent Risk Factor for Mother-to-Child Hepatitis C Virus Transmission: Results from a Multicenter Study of 1372 Mother-Infant Pairs
Massimo Resti, Chiara Azzari, Luisa Galli, Giovanna Zuin, Raffaella Giacchino, Flavia Bortolotti, Matilde Marcellini, Maria Moriondo, Maurizio de Martino, and Alberto Vierucci, for the Italian Study Group on Mother-to-Infant Hepatitis C Virus Transmission

573 Variability of the Nonstructural 5A Protein of Hepatitis C Virus Type 3a Isolates and Relation to Interferon Sensitivity
Sandrine Castelain, Hafida Khorsi, Juliette Roussel, Catherine François, Olivier Jaillon, Dominique Capron, François Penin, Czeslaw Wychowski, Eliane Meurs, and Gilles Duverlie, for the Agence Nationale de Recherche sur le SIDA AC11 Group

584 Human Cytomegalovirus Enhances Chemokine Production by Lipopolysaccharide-Stimulated Lamina Propria Macrophages
Tamara K. Redman, William J. Britt, C. Mel Wilcox, Martin F. Graham, and Phillip D. Smith

591 Accumulation of Defective Neuraminidase (NA) Genes by Influenza A Viruses in the Presence of NA Inhibitors as a Marker of Reduced Dependence on NA
Marina S. Nedyalkova, Frederick G. Hayden, Robert G. Webster, and Larisa V. Gubareva

599 Safety and Antiviral Activity at 48 Weeks of Lopinavir/Ritonavir plus Nevirapine and 2 Nucleoside Reverse-Transcriptase Inhibitors in Human Immunodeficiency Virus Type 1–Infected Protease Inhibitor–Experienced Patients
Constance A. Benson, Steven G. Deeks, Scott C. Brun, Roy M. Gulick, Joseph J. Eron, Harold A. Kessler, Robert L. Murphy, Charles Hicks, Martin King, David Wheeler, Judith Feinberg, Richard Stryker, Paul E. Sax, Sharon Riddler, Melanie Thompson, Kathryn Real, Ann Hsu, Dale Kempf, Anthony J. Japour, and Eugene Sun

608 Emergence of Autologous Neutralization-Resistant Variants from Preexisting Human Immunodeficiency Virus (HIV) Quasi Species during Virus Rebound in HIV Type 1–Infected Patients Undergoing Highly Active Antiretroviral Therapy
Feng-Xiang Wang, Tetsuya Kimura, Kumiko Nishihara, Kazuhisa Yoshimura, Atsushi Koito, and Shuzo Matsushita

618 Prospective Study of a Serogroup X *Neisseria meningitidis* Outbreak in Northern Ghana
Sébastien P. Gagneux, Abraham Hodgson, Tom A. Smith, Thierry Wirth, Ingrid Ehrhard, Giovanna Morelli, Blaise Genton, Fred N. Binka, Mark Achtman, and Gerd Pluschke

627 Sequence Stability of the Gene Encoding Outer Membrane Protein P2 of Nontypeable *Haemophilus influenzae* in the Human Respiratory Tract
Thomas J. Hiltke, Sanjay Sethi, and Timothy F. Murphy

632 Systemic and Mucosal Antibody Response to *Moraxella catarrhalis* after Exacerbations of Chronic Obstructive Pulmonary Disease
Faris Bakri, Aimee L. Brauer, Sanjay Sethi, and Timothy F. Murphy

641 Identification and Evolution of an IS*6110* Low-Copy-Number *Mycobacterium tuberculosis* Cluster
Barun Mathema, Pablo J. Bifani, Jeffrey Driscoll, Lauren Steinlein, Natalia Kurepina, Soraya L. Moghazeh, Elena Shashkina, Salvatore A. Marras, Shannon Campbell, Bonita Mangura, Kenneth Shilkret, Jack T. Crawford, Richard Frothingham, and Barry N. Kreiswirth

650 The Clinical Significance of Cerebrospinal Fluid Levels of Kynurenine Pathway Metabolites and Lactate in Severe Malaria
Isabelle M. Medana, Tran Tinh Hien, Nicholas P. Day, Nguyen Hoan Phu, Nguyen Thi Hoang Mai, Ly Van Chu'ong, Tran Thi Hong Chau, Anne Taylor, Houta Salahifar, Roland Stocker, George Smythe, Gareth D. H. Turner, Jeremy Farrar, Nicholas J. White, and Nicholas H. Hunt

657 Merozoite Surface Protein 3 and Protection against Malaria in *Aotus nancymai* Monkeys
Hajime Hisaeda, Allan Saul, Joshua J. Reece, Michael C. Kennedy, Carole A. Long, Louis H. Miller, and Anthony W. Stowers

665 **Age- and Infection Intensity–Dependent Cytokine and Antibody Production in Human Trichuriasis: The Importance of IgE**
Helen Faulkner, Joseph Turner, Joseph Kamgno, Sébastien D. Pion, Michel Boussinesq, and Janette E. Bradley

673 ***Leishmania*-Induced Cellular Recruitment during the Early Inflammatory Response: Modulation of Proinflammatory Mediators**
Claudine Matte and Martin Olivier

CONCISE COMMUNICATIONS

682 **Effect of Aging on Cytokine Production in Response to Respiratory Syncytial Virus Infection**
Richard J. Looney, Ann R. Falsey, Edward Walsh, and Debbie Campbell

686 **Effect of Previous or Simultaneous Immunization with Canarypox Expressing Cytomegalovirus (CMV) Glycoprotein B (gB) on Response to Subunit gB Vaccine plus MF59 in Healthy CMV-Seronegative Adults**
David I. Bernstein, Mark R. Schleiss, Klara Berencsi, Eva Gonczol, Michelle Dickey, Phil Khoury, Michel Cadoz, Claude Meric, John Zahradnik, Anne-Marie Duliege, and Stanley Plotkin

691 **Genetic Evidence of Transmission of Human T Cell Lymphotropic Virus Type 1 between Spouses**
Mutsunori Iga, Akihiko Okayama, Sherri Stuver, Masao Matsuoka, Nancy Mueller, Manabu Aoki, Hiroaki Mitsuya, Nobuyoshi Tachibana, and Hirohito Tsubouchi

696 **Prognostic Value of the Stromal Cell–Derived Factor 1 3′A Mutation in Pediatric Human Immunodeficiency Virus Type 1 Infection**
Eleonora Tresoldi, Maria Luisa Romiti, Michele Boniotto, Sergio Crovella, Francesca Salvatori, Elvia Palomba, Angela Pastore, Caterina Cancrini, Maurizio de Martino, Anna Plebani, Guido Castelli, Paolo Rossi, Pier Angelo Tovo, Antonio Amoroso, and Gabriella Scarlatti, in Cooperation with the European Shared Cost Project Group and the Italian Register for HIV Infection in Children

701 **Cocaine Enhances Human Immunodeficiency Virus Replication in a Model of Severe Combined Immunodeficient Mice Implanted with Human Peripheral Blood Leukocytes**
Michael D. Roth, Donald P. Tashkin, Ruth Choi, Beth D. Jamieson, Jerome A. Zack, and Gayle Cocita Baldwin

706 **Genetic Basis of Patients with Bacille Calmette-Guérin Osteomyelitis in Japan: Identification of Dominant Partial Interferon-γ Receptor 1 Deficiency as a Predominant Type**
Yuka Sasaki, Akihiko Nomura, Koichi Kusuhara, Hidetoshi Takada, Saifuddin Ahmed, Kaoru Obinata, Keisuke Hamada, Yuri Okimoto, and Toshiro Hara

CORRESPONDENCE

710 **A New Viral Agent, SEN Virus (SENV), Has Been Detected in Patients from Several Countries: The Pathogenic Role of SENV in Coinfections with Hepatitis B Virus or Hepatitis C Virus Should Be Investigated**
Isabelle Chemin, Raimundo Parana, and Christian Trépo

710 **Mapping of a *Plasmodium falciparum pfcrt* K76T Mutation: A Useful Strategy for Controlling Chloroquine Resistance in Madagascar**
F. Ariey, M. Randrianarivelojosia, J. B. Duchemin, D. Rakotondramarina, A. Ouledi, V. Robert, R. Jambou, M. Jahevitra, H. Andrianantenaina, L. Raharimalala, and P. Mauclère

Volume 185 · Number 6 **15 March 2002**

MAJOR ARTICLES

713 **Incidence and Risk Factors for Acute Hepatitis B in the United States, 1982–1998: Implications for Vaccination Programs**
Susan T. Goldstein, Miriam J. Alter, Ian T. Williams, Linda A. Moyer, Franklyn N. Judson, Karen Mottram, Michael Fleenor, Patricia L. Ryder, and Harold S. Margolis

720 **CD4 T Helper Type 1 and Regulatory T Cells Induced against the Same Epitopes on the Core Protein in Hepatitis C Virus–Infected Persons**
Angus J. MacDonald, Margaret Duffy, Miriam T. Brady, Susan McKiernan, William Hall, John Hegarty, Michael Curry, and Kingston H. G. Mills

728 **Influence of CD4 Cell Counts on the Genetic Heterogeneity of Hepatitis C Virus in Patients Coinfected with Human Immunodeficiency Virus**
Anne Marie Roque-Afonso, Mathieu Robain, Danielle Simoneau, Patricia Rodriguez-Mathieu, Michèle Gigou, Laurence Meyer, and Elisabeth Dussaix

734 **Similar Frequency of Rhinovirus-Infectible Cells in Upper and Lower Airway Epithelium**
Anne G. Mosser, Rebecca Brockman-Schneider, Svetlana Amineva, Lacinda Burchell, Julie B. Sedgwick, William W. Busse, and James E. Gern

744 **Molecular Diagnosis of Human Enteroviruses by Phylogeny-Based Classification by Use of the VP4 Sequence**
Hiroaki Ishiko, Yasushi Shimada, Mari Yonaha, Osamu Hashimoto, Akio Hayashi, Kenji Sakae, and Naokazu Takeda

755 **Human Immunodeficiency Virus (HIV)–Specific Effector CD8 T Cell Activity in Patients with Primary HIV Infection**
Galit Alter, Alefia Merchant, Christos M. Tsoukas, Danielle Rouleau, Roger P. LeBlanc, Pierre Côté, Jean-Guy Baril, Réjean Thomas, Vinh-Kim Nguyen, Rafik-Pierre Sékaly, Jean-Pierre Routy, and Nicole F. Bernard

766 **The Impact of Persistent Gastrointestinal Colonization on the Transmission Dynamics of Vancomycin-Resistant Enterococci**
Erika M. C. D'Agata, Mary Ann Horn, and Glenn F. Webb

774 **Phylogenetic Distribution of Virulence-Associated Genes among *Escherichia coli* Isolates Associated with Neonatal Bacterial Meningitis in The Netherlands**
James R. Johnson, Eric Oswald, Timothy T. O'Bryan, Michael A. Kuskowski, and Lodewijk Spanjaard

785 **Inhibition of Shiga Toxin Cytotoxicity in Human Renal Cortical Epithelial Cells by Nitrobenzylthioinosine**
Takaomi Sekino, Nobutaka Kiyokawa, Tomoko Taguchi, Kazuhiro Ohmi, Hideki Nakajima, Toyo Suzuki, Susumu Furukawa, Hiroshi Nakao, Tae Takeda, and Junichiro Fujimoto

797 ***Borrelia burgdorferi* Are Susceptible to Killing by a Variety of Human Polymorphonuclear Leukocyte Components**
Denise Lusitani, Stephen E. Malawista, and Ruth R. Montgomery

805 **Bacterial Endosymbionts of *Onchocerca volvulus* in the Pathogenesis of Posttreatment Reactions**
Paul B. Keiser, Stacey M. Reynolds, Kwablah Awadzi, Eric A. Ottesen, Mark J. Taylor, and Thomas B. Nutman

812 **CD4 T Cell Responses to a Variant Antigen of the Malaria Parasite *Plasmodium falciparum*, Erythrocyte Membrane Protein–1, in Individuals Living in Malaria-Endemic Areas**
Catherine E. M. Allsopp, Latifu A. Sanni, Lieke Reubsaet, Francis Ndungu, Chris Newbold, Tabitha Mwangi, Kevin Marsh, and Jean Langhorne

820 **A Recombinant Blood-Stage Malaria Vaccine Reduces *Plasmodium falciparum* Density and Exerts Selective Pressure on Parasite Populations in a Phase 1–2b Trial in Papua New Guinea**
Blaise Genton, Inoni Betuela, Ingrid Felger, Fadwa Al-Yaman, Robin F. Anders, Allan Saul, Lawrence Rare, Moses Baisor, Kerry Lorry, Graham V. Brown, David Pye, David O. Irving, Thomas A. Smith, Hans-Peter Beck, and Michael P. Alpers

CONCISE COMMUNICATIONS

828 **Cellular Immunity in Monozygotic Twins Discordant for Chronic Fatigue Syndrome**
Daniel E. Sabath, Serge Barcy, David M. Koelle, Judy Zeh, Suzanne Ashton, and Dedra Buchwald

833 **Human Papillomavirus DNA in Oral Mucosal Lesions**
Lucia Giovannelli, Giuseppina Campisi, Anna Lama, Ornella Giambalvo, John Osborn, Valerio Margiotta, and Pietro Ammatuna

837 **Ciprofloxacin Resistance in *Campylobacter jejuni* Evolves Rapidly in Chickens Treated with Fluoroquinolones**
Patrick F. McDermott, Sonya M. Bodeis, Linda L. English, David G. White, Robert D. Walker, Shaohua Zhao, Shabbir Simjee, and David D. Wagner

841 **A Pseudo-outbreak of *Chlamydia trachomatis* in a State Residential Facility: Implications for Diagnostic Testing**
Deborah A. Gust, Susan A. Wang, Carolyn M. Black, Teresa M. Brown, Michael E. St. Louis, Katherine A. King, M. Patricia Quinlisk, and William C. Levine

CORRESPONDENCE

845 Field Effectiveness of Vi Polysaccharide Typhoid Vaccine in the People's Republic of China
Subhash C. Arya

845 Reply
Hong Hui Yang, John Clemens, and Paul Kilgore

Volume 185 · Number 7 **1 April 2002**

MAJOR ARTICLES

847 Human Herpesvirus 6 Viremia in Bone Marrow Transplant Recipients: Clinical Features and Risk Factors
Tetsushi Yoshikawa, Yoshizo Asano, Masaru Ihira, Kyoko Suzuki, Masahiro Ohashi, Sadao Suga, Kazuko Kudo, Keizo Horibe, Seiji Kojima, Koji Kato, Takaharu Matsuyama, and Yukihiro Nishiyama

854 Preemptive Use of Oral Ganciclovir to Prevent Cytomegalovirus Infection in Liver Transplant Patients: A Randomized, Placebo-Controlled Trial
Carlos V. Paya, Jennie A. Wilson, Mark J. Espy, Irene G. Sia, Michael J. DeBernardi, Thomas F. Smith, Robin Patel, Greg Jenkins, William S. Harmsen, David J. Vanness, and Russell H. Wiesner

861 Comparison of Cytomegalovirus (CMV) UL97 Gene Sequences in the Blood and Vitreous of Patients with Acquired Immunodeficiency Syndrome and CMV Retinitis
Huiling Hu, Douglas A. Jabs, Michael S. Forman, Barbara K. Martin, J. P. Dunn, David V. Weinberg, and Janet L. Davis, for the Cytomegalovirus Retinitis and Viral Resistance Study Group

868 Relationship of Hepatitis C Genotype 1 NS5A Sequence Mutations to Early Phase Viral Kinetics and Interferon Effectiveness
Deborah A. Schiappa, Chetna Mittal, Jennifer A. Brown, and Brian P. Mika

878 Parenteral Vaccination against Influenza Does Not Induce a Local Antigen-Specific Immune Response in the Nasal Mucosa
Karl Albert Brokstad, Jens-Christian Eriksson, Rebecca Jane Cox, Turid Tynning, Jan Olofsson, Roland Jonsson, and Åke Davidsson

885 Regulation of CC Chemokine Receptor 5 and CD4 Expression and Human Immunodeficiency Virus Type 1 Replication in Human Macrophages and Microglia by T Helper Type 2 Cytokines
Jianbin Wang, Keith Crawford, Menglan Yuan, Hui Wang, Paul R. Gorry, and Dana Gabuzda

898 Broad Nucleoside-Analogue Resistance Implications for Human Immunodeficiency Virus Type 1 Reverse-Transcriptase Mutations at Codons 44 and 118
Laura Romano, Giulietta Venturi, Stuart Bloor, Richard Harrigan, Brendan A. Larder, Jennifer C. Major, and Maurizio Zazzi

905 Equal Plasma Viral Loads Predict a Similar Rate of CD4⁺ T Cell Decline in Human Immunodeficiency Virus (HIV) Type 1– and HIV-2–Infected Individuals from Senegal, West Africa
Geoffrey S. Gottlieb, Papa Salif Sow, Stephen E. Hawes, Ibra Ndoye, Mary Redman, Awa M. Coll-Seck, Mame A. Faye-Niang, Aissatou Diop, Jane M. Kuypers, Cathy W. Critchlow, Richard Respess, James I. Mullins, and Nancy B. Kiviat

915 The Heterogeneity of Endemic Community Pediatric Group A Streptococcal Pharyngeal Isolates and Their Relationship to Invasive Isolates
Heather A. Haukness, Robert R. Tanz, Richard B. Thomson, Jr., Deirdre K. Pierry, Edward L. Kaplan, Bernard Beall, Dwight Johnson, Nancy P. Hoe, James M. Musser, and Stanford T. Shulman

921 Differential Effects of p38- and Extracellular Signal–Regulated Kinase Mitogen–Activated Protein Kinase Inhibitors on Inducible Nitric Oxide Synthase and Tumor Necrosis Factor Production in Murine Macrophages Stimulated with *Streptococcus pneumoniae*
Richelle M. Monier, Karen L. Orman, Elizabeth A. Meals, and B. Keith English

927 Reduction of Nasopharyngeal Carriage of *Streptococcus pneumoniae* after Administration of a 9-Valent Pneumococcal Conjugate Vaccine to Toddlers Attending Day Care Centers
Ron Dagan, Noga Givon-Lavi, Orly Zamir, Merav Sikuler-Cohen, Lior Guy, Jacob Janco, Pablo Yagupsky, and Drora Fraser

937 **Inhibition of Staphylococcal Wound Infection and Potentiation of Antibiotic Prophylaxis by a Recombinant Fragment of the Fibronectin-Binding Protein of *Staphylococcus aureus***
Barbara E. Menzies, Yordanka Kourteva, Allen B. Kaiser, and Douglas S. Kernodle

944 **Markers of Inflammation in Bacterial Diarrhea among Travelers, with a Focus on Enteroaggregative *Escherichia coli* Pathogenicity**
David E. Greenberg, Zhi-Dong Jiang, Robert Steffen, Mangala P. Verenker, and Herbert L. DuPont

950 **Induction of Protective Immunity by Synthetic *Vibrio cholerae* Hexasaccharide Derived from *V. cholerae* O1 Ogawa Lipopolysaccharide Bound to a Protein Carrier**
Anatoly Chernyak, Seiichi Kondo, Terri K. Wade, Michael D. Meeks, Pedro M. Alzari, Jean-Michel Fournier, Ronald K. Taylor, Pavol Kováč, and William F. Wade

963 **The Role of Endogenous Interleukin (IL)–18, IL-12, IL-1β, and Tumor Necrosis Factor–α in the Production of Interferon-γ Induced by *Candida albicans* in Human Whole-Blood Cultures**
Mihai G. Netea, Rogier J. L. Stuyt, Soo-Hyun Kim, Jos W. M. Van der Meer, Bart Jan Kullberg, and Charles A. Dinarello

971 **Absolute Levels and Ratios of Proinflammatory and Anti-inflammatory Cytokine Production In Vitro Predict Clinical Immunity to *Plasmodium falciparum* Malaria**
D. Dodoo, F. M. Omer, J. Todd, B. D. Akanmori, K. A. Koram, and E. M. Riley

CONCISE COMMUNICATIONS

980 **Molecular Epidemiology of Influenza A(H3N2) Virus Reinfections**
Catherine B. Smith, Nancy J. Cox, Kanta Subbarao, Larry H. Taber, and W. Paul Glezen

986 **Expression of Human Immunodeficiency Virus Coreceptors CXC Chemokine Receptor 4 and CC Chemokine Receptor 5 on Monocytes Is Down-regulated during Human Endotoxemia**
Nicole P. Juffermans, Sebastiaan Weijer, Annelies Verbon, Peter Speelman, and Tom van der Poll

990 **Correlates of Prevalent and Incident Kaposi's Sarcoma–Associated Herpesvirus Infection in Men Who Have Sex with Men**
Corey Casper, Anna Wald, John Pauk, Stephen R. Tabet, Lawrence Corey, and Connie L. Celum

994 **Formation of Vegetations during Infective Endocarditis Excludes Binding of Bacterial-Specific Host Antibodies to *Enterococcus faecalis***
John K. McCormick, Timothy J. Tripp, Gary M. Dunny, and Patrick M. Schlievert

CORRESPONDENCE

998 **Role of Interleukin-18 in Human Immunodeficiency Virus Type 1 Infection**
Donato Torre, Agostino Pugliese, Filippo Speranza, Roberto Martegani, and Roberto Tambini

998 **Reply**
Hee Jung Choi, Charles A. Dinarello, and Leland Shapiro

999 **Effect of Productive In Vitro Human Immunodeficiency Virus or Simian Immunodeficiency Virus Infection on Telomerase Activity in Lymphoid and Nonlymphoid Cells**
Pavel Bostik, Geraldine L. Dodd, Snehal S. Patel, Hajar Kadivar, and Aftab A. Ansari

1001 **Reply**
Gianna Ballon and Anita De Rossi

Volume 185 · Number 8 15 April 2002

TRIBUTE

1003 Harry F. Dowling, M.D., 1904–2000
Marvin Turck

MAJOR ARTICLES

1005 Risk of Influenza A (H5N1) Infection among Poultry Workers, Hong Kong, 1997–1998
Carolyn Buxton Bridges, Wilina Lim, Jean Hu-Primmer, Les Sims, Keiji Fukuda, K. H. Mak, Thomas Rowe, William W. Thompson, Laura Conn, Xiuhua Lu, Nancy J. Cox, and Jacqueline M. Katz

1011 Illness Severity, Viral Shedding, and Antibody Responses in Infants Hospitalized with Bronchiolitis Caused by Respiratory Syncytial Virus
Peter F. Wright, William C. Gruber, Melissa Peters, George Reed, Yuwei Zhu, Frances Robinson, Shanita Coleman-Dockery, and Barney S. Graham

1019 Seroprevalence and Coinfection with Herpes Simplex Virus Type 1 and Type 2 in the United States, 1988–1994
Fujie Xu, Julia A. Schillinger, Maya R. Sternberg, Robert E. Johnson, Francis K. Lee, Andre J. Nahmias, and Lauri E. Markowitz

1025 Comparative Analysis of CD8$^+$ T Cell Responses against Human Cytomegalovirus Proteins pp65 and Immediate Early 1 Shows Similarities in Precursor Frequency, Oligoclonality, and Phenotype
Naeem Khan, Mark Cobbold, Russell Keenan, and Paul A. H. Moss

1035 Suppression of Human Immunodeficiency Virus Replication during Acute Measles
William J. Moss, Judith J. Ryon, Mwaka Monze, Felicity Cutts, Thomas C. Quinn, and Diane E. Griffin

1043 Elevated Mucosal Addressin Cell Adhesion Molecule–1 Expression in Acquired Immunodeficiency Syndrome Is Maintained during Antiretroviral Therapy by Intestinal Pathogens and Coincides with Increased Duodenal CD4 T Cell Densities
Yin M. Miao, Peter J. Hayes, Frances M. Gotch, Mike C. Barrett, Nick D. Francis, and Brian G. Gazzard

1051 Is Human Immunodeficiency Virus RNA Load Composed of Neutralized Immune Complexes?
Ferdinando Dianzani, Guido Antonelli, Elisabetta Riva, Ombretta Turriziani, Laura Antonelli, Stephen Tyring, Daniel A. Carrasco, Hung Lee, Derrick Nguyen, Jingzhi Pan, Joyce Poast, Miles Cloyd, and Samuel Baron

1055 Response to Treatment and Disease Progression Linked to CD4$^+$ T Cell Surface CC Chemokine Receptor 5 Density in Human Immunodeficiency Virus Type 1 Vertical Infection
Alain Gervaix, Joelle Nicolas, Pierre Portales, Klara Posfay-Barbe, Claire-Anne Wyler, Michel Segondy, Odile Avinens, Claire-Anne Siegrist, Jacques Clot, Jean-François Eliaou, Jacques Astruc, and Pierre Corbeau

1062 Virologic and Immunologic Response to Regimens Containing Nevirapine or Efavirenz in Combination with 2 Nucleoside Analogues in the Italian Cohort Naive Antiretrovirals (I.Co.N.A.) Study
Alessandro Cozzi-Lepri, Andrew N. Phillips, Antonella d'Arminio Monforte, Nicolò Piersantelli, Anna Orani, Nicola Petrosillo, Francesco Leoncini, Antonio Scerbo, Paolo Tundo, Nicola Abrescia, and Mauro Moroni, for the Italian Cohort Naive Antiretrovirals (I.Co.N.A.) Study Group

1070 Selection of Zidovudine Resistance Mutations and Escape of Human Immunodeficiency Virus Type 1 from Antiretroviral Pressure in Stavudine-Treated Pediatric Patients
Horst-Guenter Maxeiner, Wilco Keulen, Rob Schuurman, Marc Bijen, Loek de Graaf, Albert van Wijk, Nicole Back, Mark W. Kline, Charles A. B. Boucher, and Monique Nijhuis

1077 Feline Immunodeficiency Virus Infection Is Characterized by B7$^+$CTLA4$^+$ T Cell Apoptosis
Mary B. Tompkins, Marta E. Bull, Janet L. Dow, Judith M. Ball, Ellen W. Collisson, Barbara J. Winslow, Anagha P. Phadke, Thomas W. Vahlenkamp, and Wayne A. Tompkins

1094 **Evidence for Differential Expression of *Candida albicans* Virulence Genes during Oral Infection in Intact and Human Immunodeficiency Virus Type 1–Transgenic Mice**
Jean-Sébastien Ripeau, Marie Fiorillo, Francine Aumont, Pierre Belhumeur, and Louis de Repentigny

1103 **Mucosal Candidiasis in Transgenic Mice Expressing Human Immunodeficiency Virus Type 1**
Louis de Repentigny, Francine Aumont, Jean-Sébastien Ripeau, Marie Fiorillo, Denis G. Kay, Zaher Hanna, and Paul Jolicoeur

1115 **Glutathione Protects Mice from Lethal Sepsis by Limiting Inflammation and Potentiating Host Defense**
Pia Villa, Alessandra Saccani, Antonio Sica, and Pietro Ghezzi

1121 **Genogrouping and Incidence of Virulence Factors of *Enterococcus faecalis* in Liver Transplant Patients Differ from Blood Culture and Fecal Isolates**
Karola Waar, Albrecht B. Muscholl-Silberhorn, Rob J. L. Willems, Maarten J. H. Slooff, Hermie J. M. Harmsen, and John E. Degener

1128 **Presence of *Rickettsia helvetica* in Granulomatous Tissue from Patients with Sarcoidosis**
Kenneth Nilsson, Carl Påhlson, Agneta Lukinius, Lars Eriksson, Lennart Nilsson, and Olle Lindquist

1139 **Type II Alveolar Cells Play Roles in Macrophage-Mediated Host Innate Resistance to Pulmonary Mycobacterial Infections by Producing Proinflammatory Cytokines**
Katsumasa Sato, Haruaki Tomioka, Toshiaki Shimizu, Tatsuo Gonda, Fusao Ota, and Chiaki Sano

1148 ***Onchocerca volvulus*–Exposed Persons Fail to Produce Interferon-γ in Response to *O. volvulus* Antigen but Mount Proliferative Responses with Interleukin-5 and IL-13 Production that Decrease with Increasing Microfilarial Density**
Norbert W. Brattig, Bianca Lepping, Christian Timmann, Dietrich W. Büttner, Yeboah Marfo, Christoph Hamelmann, and Rolf D. Horstmann

1155 **Protection of Humans against Malaria by Immunization with Radiation-Attenuated *Plasmodium falciparum* Sporozoites**
Stephen L. Hoffman, Lucy M. L. Goh, Thomas C. Luke, Imogene Schneider, Thong P. Le, Denise L. Doolan, John Sacci, Patricia de la Vega, Megan Dowler, Chris Paul, Daniel M. Gordon, Jose A. Stoute, L. W. Preston Church, Martha Sedegah, D. Gray Heppner, W. Ripley Ballou, and Thomas L. Richie

CONCISE COMMUNICATIONS

1165 **Neutralization of Pseudotyped Vesicular Stomatitis Virus Expressing Hepatitis C Virus Envelope Glycoprotein 1 or 2 by Serum from Patients**
L. Martin Lagging, Keith Meyer, Johan Westin, Rune Wejstål, Gunnar Norkrans, Magnus Lindh, and Ranjit Ray

1170 **Hepatitis A Virus Infection in Tamarins: Experimental Transmission via Contaminated Factor VIII Concentrates**
Michael Chudy, Christiane Stahl-Hennig, Annemarie Berger, C. Micha Nübling, Gerhard Hunsmann, Holger F. Rabenau, and Johannes Löwer

1174 **Monocyte Chemoattractant Protein–2 (CC Chemokine Ligand 8) Inhibits Replication of Human Immunodeficiency Virus Type 1 via CC Chemokine Receptor 5**
Otto O. Yang, Eduardo A. Garcia-Zepeda, Bruce D. Walker, and Andrew D. Luster

1179 **A Pilot Study of the Discontinuation of Antifungal Therapy for Disseminated Cryptococcal Disease in Patients with Acquired Immunodeficiency Syndrome, following Immunologic Response to Antiretroviral Therapy**
Judith A. Aberg, Richard W. Price, Dorie M. Heeren, and Barry Bredt

1183 **Protective Effect of Interleukin-4 −589T Polymorphism on Human Immunodeficiency Virus Type 1 Disease Progression: Relationship with Virus Load**
Emi E. Nakayama, Laurence Meyer, Aikichi Iwamoto, Anne Persoz, Yoshiyuki Nagai, Christine Rouzioux, Jean-François Delfraissy, Patrice Debre, Dorian McIlroy, Ioannis Theodorou, Tatsuo Shioda, and the SEROCO Study Group

1187 **Vitamin A Supplementation and Human Immunodeficiency Virus Type 1 Shedding in Women: Results of a Randomized Clinical Trial**
Jared M. Baeten, R. Scott McClelland, Julie Overbaugh, Barbra A. Richardson, Sandra Emery, Ludo Lavreys, Kishorchandra Mandaliya, Daniel D. Bankson, Jeckoniah O. Ndinya-Achola, Job J. Bwayo, and Joan K. Kreiss

1192 **Immune Protection against Staphylococcal Enterotoxin–Induced Toxic Shock by Vaccination with a Venezuelan Equine Encephalitis Virus Replicon**
John S. Lee, Beverly K. Dyas, Steve S. Nystrom, Cathleen M. Lind, Jonathan F. Smith, and Robert G. Ulrich

1197 **Worldwide Incidence of Multidrug-Resistant Tuberculosis**
Christopher Dye, Marcos A. Espinal, Catherine J. Watt, Cyrille Mbiaga, and Brian G. Williams

1203 **Polymerase Chain Reaction Detection of *Aspergillus* DNA in Experimental Models of Invasive Aspergillosis**
Juergen Loeffler, Kerstin Kloepfer, Holger Hebart, Laura Najvar, John R. Graybill, William R. Kirkpatrick, Thomas F. Patterson, Klaus Dietz, Ralf Bialek, and Hermann Einsele

1207 **Identification of a Conserved *Plasmodium falciparum var* Gene Implicated in Malaria in Pregnancy**
J. Alexandra Rowe, Sue A. Kyes, Stephen J. Rogerson, Hamza A. Babiker, and Ahmed Raza

1212 **Notices**

Volume 185 · Number 9 **1 May 2002**

MAJOR ARTICLES

1213 **Differing Influences of Virus Burden and Immune Activation on Disease Severity in Secondary Dengue-3 Virus Infections**
Daniel H. Libraty, Timothy P. Endy, Huo-Shu H. Houng, Sharone Green, Siripen Kalayanarooj, Saroj Suntayakorn, Wanya Chansiriwongs, David W. Vaughn, Ananda Nisalak, Francis A. Ennis, and Alan L. Rothman

1222 **A Randomized, Double-Blind, Placebo-Controlled Trial of Dexamethasone in Severe Respiratory Syncytial Virus (RSV) Infection: Effects on RSV Quantity and Clinical Outcome**
Steven C. Buckingham, Hasan S. Jafri, Andrew J. Bush, Cecilia M. Carubelli, Paul Sheeran, R. Doug Hardy, Martin G. Ottolini, Octavio Ramilo, and John P. DeVincenzo

1229 **Increased Risk of High-Grade Anal Neoplasia Associated with a Human Papillomavirus Type 16 E6 Sequence Variant**
Maria M. Da Costa, Charissa J. Hogeboom, Elizabeth A. Holly, and Joel M. Palefsky

1238 **Reactivation of and Primary Infection with Human Herpesvirus 8 among Solid-Organ Transplant Recipients**
Frank J. Jenkins, Linda J. Hoffman, and Angela Liegey-Dougall

1244 **Effect of Human Immunodeficiency Virus (HIV) Type 1 Envelope Subtypes A and D on Disease Progression in a Large Cohort of HIV-1–Positive Persons in Uganda**
Pontiano Kaleebu, Neil French, Cedric Mahe, David Yirrell, Christine Watera, Fred Lyagoba, Jessica Nakiyingi, Alleluiah Rutebemberwa, Dilys Morgan, Jonathan Weber, Charles Gilks, and Jimmy Whitworth

1251 **A Randomized Trial of Simplified Maintenance Therapy with Abacavir, Lamivudine, and Zidovudine in Human Immunodeficiency Virus Infection**
Milos Opravil, Bernard Hirschel, Adriano Lazzarin, Hansjakob Furrer, Jean-Philippe Chave, Sabine Yerly, Leslie R. Bisset, Marek Fischer, Pietro Vernazza, Enos Bernasconi, Manuel Battegay, Bruno Ledergerber, Huldrych Günthard, Colin Howe, Rainer Weber, and Luc Perrin, for the Swiss HIV Cohort Study

1261 **Low Risk of Treatment Failure after Substitution of Nevirapine for Protease Inhibitors among Human Immunodeficiency Virus–Infected Patients with Virus Suppression**
Jeanne P. Dieleman, Miriam C. J. M. Sturkenboom, Ferdinand W. Wit, Marielle Jambroes, Jan-Willem Mulder, Jacob H. ten Veen, Job Juttmann, Bruno H. C. Stricker, Joep M. A. Lange, and Marchina E. van der Ende, for the ATHENA (AIDS Therapy Evaluation, The Netherlands) Study Group

1269 **A Comprehensive Study of *Candida*-Specific Antibodies in the Saliva of Human Immunodeficiency Virus–Positive Individuals with Oropharyngeal Candidiasis**
Karen L. Wozniak, Janet E. Leigh, Shannon Hager, Rolf K. Swoboda, and Paul L. Fidel, Jr.

1277 **Induction of Cross-Reactive Antibodies by Immunization of Healthy Adults with Types Ia and Ib Group B Streptococcal Polysaccharide–Tetanus Toxoid Conjugate Vaccines**
Anne Karin Brigtsen, Dennis L. Kasper, Carol J. Baker, Harold J. Jennings, and Hilde-Kari Guttormsen

1285 **Adhesion and Virulence Properties of Epidemic Canadian Methicillin-Resistant *Staphylococcus aureus* Strain 1: Identification of Novel Adhesion Functions Associated with Plasmin-Sensitive Surface Protein**
Mario Huesca, Robert Peralta, Daniel N. Sauder, Andrew E. Simor, and Martin J. McGavin

1297 ***Clostridium difficile* Toxin A Alters In Vitro–Adherent Neutrophil Morphology and Function**
Gerly A. C. Brito, Gail W. Sullivan, William P. Ciesla, Jr., Holliday T. Carper, Gerald L. Mandell, and Richard L. Guerrant

1307 **Characterization of Vaginal Flora and Bacterial Vaginosis in Women Who Have Sex with Women**
Jeanne M. Marrazzo, Laura A. Koutsky, David A. Eschenbach, Kathy Agnew, Kathleen Stine, and Sharon L. Hillier

1314 **Effect of Antipyretic Agents on Uptake, Transport, and Release of Antimicrobial Agents by Human Polymorphonuclear Leukocytes**
Gerald L. Mandell and Elizabeth J. Coleman

1320 **Infectivity of a *Cryptosporidium parvum* Isolate of Cervine Origin for Healthy Adults and Interferon-γ Knockout Mice**
Pablo C. Okhuysen, Stephen M. Rich, Cynthia L. Chappell, Kevin A. Grimes, Giovanni Widmer, Xiaochuan Feng, and Saul Tzipori

1326 **Pulmonary Manifestations of Uncomplicated Falciparum and Vivax Malaria: Cough, Small Airways Obstruction, Impaired Gas Transfer, and Increased Pulmonary Phagocytic Activity**
Nicholas M. Anstey, Susan P. Jacups, Timothy Cain, Travis Pearson, Patrick J. Ziesing, Dale A. Fisher, Bart J. Currie, Paul J. Marks, and Graeme P. Maguire

CONCISE COMMUNICATIONS

1335 **Norwalk Virus Infection and Disease Is Associated with ABO Histo–Blood Group Type**
Anne M. Hutson, Robert L. Atmar, David Y. Graham, and Mary K. Estes

1338 **Rhinovirus and Coronavirus Infection–Associated Hospitalizations among Older Adults**
Ann R. Falsey, Edward E. Walsh, and Frederick G. Hayden

1342 **Genetic Heterogeneity of Hepatitis E Virus Recovered from Japanese Patients with Acute Sporadic Hepatitis**
Kazuaki Takahashi, Jong-Hon Kang, Sachiyo Ohnishi, Kunihiko Hino, and Shunji Mishiro

1346 **Elevated Levels of Anti-CD9 Antibodies in the Cerebrospinal Fluid of Patients with Subacute Sclerosing Panencephalitis**
Toko Shimizu, Toyojiro Matsuishi, Ryo Iwamoto, Kazuyo Handa, Hiroshi Yoshioka, Hirohisa Kato, Shigeharu Ueda, Hideo Hara, Takeshi Tabira, and Eisuke Mekada

1351 **Chemokine Receptor Gene Polymorphisms and Risk of Human T Lymphotropic Virus Type I Infection in Jamaica**
Michie Hisada, Renu B. Lal, Silvina Masciotra, Donna L. Rudolph, Maureen P. Martin, Mary Carrington, Rainford J. Wilks, and Angela Manns

1355 **Low Levels of Perforin Expression in $CD8^+$ T Lymphocyte Granules in Lymphoid Tissue during Acute Human Immunodeficiency Virus Type 1 Infection**
Jan Andersson, Sabine Kinloch, Anders Sönnerborg, Jakob Nilsson, Thomas E. Fehniger, Anna-Lena Spetz, Homira Behbahani, Li-Ean Goh, Hugh McDade, Brian Gazzard, Hans Stellbrink, David Cooper, and Luc Perrin

1359 **Safety, Tolerability, and Pharmacokinetic Effects of Thalidomide in Patients Infected with Human Immunodeficiency Virus: AIDS Clinical Trials Group 267**
David A. Wohl, Francesca T. Aweeka, John Schmitz, Roger Pomerantz, Deborah Weng Cherng, John Spritzler, Lawrence Fox, David Simpson, Dawn Bell, M. K. Holohan, Steven Thomas, Wayne Robinson, Gilla Kaplan, and Hedy Teppler, for the National Institute of Allergy and Infectious Diseases AIDS Clinical Trials Group 267

1364 **Recurrent Invasive Pneumococcal Disease in Individuals with Human Immunodeficiency Virus Infection**
M. Catherine McEllistrem, Aaron B. Mendelsohn, Margaret A. Pass, John A. Elliott, Cynthia G. Whitney, John A. Kolano, and Lee H. Harrison

1369 ***Lactobacillus fermentum* RC-14 Inhibits *Staphylococcus aureus* Infection of Surgical Implants in Rats**
Bing Siang Gan, Juan Kim, Gregor Reid, Peter Cadieux, and Jeffrey C. Howard

1373 **Recombinant *Paragonimus westermani* Yolk Ferritin Is a Useful Serodiagnostic Antigen**
Tae Yun Kim, Il-Joong Joo, Shin-Yong Kang, Seung-Yull Cho, Yoon Kong, Xiao-Xian Gan, Kom Sukomtason, Kabkaew Sukomtason, and Sung-Jong Hong

CORRESPONDENCE

1376 **Association between Secondary Mutations in Human Immunodeficiency Virus Type 1 Protease and Therapeutic Outcome**
John Frater, David Dunn, Jonathan N. Weber, and Myra O. McClure

1376 **Reply**
Carlo-Federico Perno, Alessandro Cozzi-Lepri, Claudia Balotta, and Antonella d'Arminio Monforte

Volume 185 · Number 10 15 May 2002

MAJOR ARTICLES

1379 **Age-Related Decrease in Adenovirus-Specific T Cell Responses**
Martina Sester, Urban Sester, Susana Alarcon Salvador, Gunnar Heine, Sabine Lipfert, Matthias Girndt, Barbara Gärtner, and Hans Köhler

1388 **Peripheral Blood Mononuclear Cells from Infants Hospitalized Because of Respiratory Syncytial Virus Infection Express T Helper–1 and T Helper–2 Cytokines and CC Chemokine Messenger RNA**
Ralph A. Tripp, Deborah Moore, Albert Barskey IV, Les Jones, Caminade Moscatiello, Harry Keyserling, and Larry J. Anderson

1395 **Intra-abdominal Bacterial Infection Reactivates Latent Pulmonary Cytomegalovirus in Immunocompetent Mice**
Charles H. Cook, Yingxue Zhang, Brian J. McGuinness, Michael C. Lahm, Daniel D. Sedmak, and Ronald M. Ferguson

1401 **Close Link between $CD4^+$ and $CD8^+$ T Cell Proliferation Defects in Patients with Human Immunodeficiency Virus Disease and Relationship to Extended Periods of $CD4^+$ Lymphopenia**
Scott F. Sieg, Jonathan B. Mitchem, Douglas A. Bazdar, and Michael M. Lederman

1409 **Persistence of Human Immunodeficiency Virus (HIV) Type 1 DNA in Peripheral Blood Despite Prolonged Suppression of Plasma HIV-1 RNA in Children**
Akihiko Saitoh, Karen Hsia, Terence Fenton, Christine A. Powell, Cindy Christopherson, Courtney V. Fletcher, Stuart E. Starr, and Stephen A. Spector

1417 **On the Role of *Staphylococcus aureus* Sortase and Sortase-Catalyzed Surface Protein Anchoring in Murine Septic Arthritis**
Ing-Marie Jonsson, Sarkis K. Mazmanian, Olaf Schneewind, Margareta Verdrengh, Tomas Bremell, and Andrzej Tarkowski

1425 **Gene Therapy Using a Simian Virus 40–Derived Vector Inhibits the Development of In Vivo Human Immunodeficiency Virus Type 1 Infection of Severe Combined Immunodeficiency Mice Implanted with Human Fetal Thymic and Liver Tissue**
Harris Goldstein, Massimo Pettoello-Mantovani, Christina M. Anderson, Pierre Cordelier, Roger J. Pomerantz, and David S. Strayer

1431 **Proinflammatory Responses to Lipo-oligosaccharide of *Neisseria meningitidis* Immunotype Strains in Relation to Virulence and Disease**
Jan M. Braun, Caroline C. Blackwell, Ian R. Poxton, Omar El Ahmer, Ann E. Gordon, Osama M. Al Madani, Donald M. Weir, Sonja Giersen, and Josef Beuth

1439 **Epidemiological Correlates of Virulence Genotype and Phylogenetic Background among *Escherichia coli* Blood Isolates from Adults with Diverse-Source Bacteremia**
James R. Johnson, Michael A. Kuskowski, Timothy T. O'Bryan, and Joel N. Maslow

1448 **The Changing Age and Seasonal Profile of Pertussis in Canada**
Danuta M. Skowronski, Gaston De Serres, Diane MacDonald, Wrency Wu, Carol Shaw, Jane Macnabb, Sylvie Champagne, David M. Patrick, and Scott A. Halperin

1454 **Multilocus Restriction Typing: A Novel Tool for Studying Global Epidemiology of *Burkholderia cepacia* Complex Infection in Cystic Fibrosis**
Tom Coenye and John J. LiPuma

1463 **Association between *Helicobacter felis*–Induced Gastritis and Elevated Glycated Hemoglobin Levels in a Mouse Model of Type 1 Diabetes**
Nuthapong Ukarapol, Rodolfo E. Bégué, James Hempe, Hernán Correa, Ricardo Gómez, and Alfonso Vargas

1468 **Clinical and Genetic Heterogeneity of Inherited Autosomal Recessive Susceptibility to Disseminated *Mycobacterium bovis* Bacille Calmette-Guérin Infection**
Houda Elloumi-Zghal, Mohamed Ridha Barbouche, Jalel Chemli, Mohamed Béjaoui, Abdelaziz Harbi, Noureddine Snoussi, Sonia Abdelhak, and Koussay Dellagi

1476 **The Granulocyte Colony-Stimulating Factor Response after Intrapulmonary and Systemic Bacterial Challenges**
Lee J. Quinton, Steve Nelson, Darren M. Boé, Ping Zhang, Qiu Zhong, Jay K. Kolls, and Gregory J. Bagby

1483 **The Role of Toll-like Receptor (TLR) 2 and TLR4 in the Host Defense against Disseminated Candidiasis**
Mihai G. Netea, Chantal A. A. Van der Graaf, Alieke G. Vonk, Ineke Verschueren, Jos W. M. Van der Meer, and Bart Jan Kullberg

REVIEW

1490 **Therapeutic Use of Cytokines to Modulate Phagocyte Function for the Treatment of Infectious Diseases: Current Status of Granulocyte Colony-Stimulating Factor, Granulocyte-Macrophage Colony-Stimulating Factor, Macrophage Colony-Stimulating Factor, and Interferon-γ**
Kai Hübel, David C. Dale, and W. Conrad Liles

CONCISE COMMUNICATIONS

1502 **Outbreaks of Adult Gastroenteritis Traced to a Single Genotype of Rotavirus**
Dixie D. Griffin, Madeleine Fletcher, Martin E. Levy, Myra Ching-Lee, Robert Nogami, Leslie Edwards, Heather Peters, Laura Montague, Jon R. Gentsch, and Roger I. Glass

1506 **Evolution of Human Immunodeficiency Virus Type 1 Populations after Resumption of Therapy following Treatment Interruption and Shift in Resistance Genotype**
Jacques Izopet, Corinne Souyris, Allan Hance, Karine Sandres-Sauné, Muriel Alvarez, Christophe Pasquier, François Clavel, Jacqueline Puel, and Patrice Massip

1511 **Clonal Association of *Staphylococcus aureus* Causing Bullous Impetigo and the Emergence of New Methicillin-Resistant Clonal Groups in Kansai District in Japan**
Takayuki Yamaguchi, Yoshiko Yokota, Jun Terajima, Tetsuya Hayashi, Martin Aepfelbacher, Masaru Ohara, Hitoshi Komatsuzawa, Haruo Watanabe, and Motoyuki Sugai

1517 **Variant Mannose-Binding Lectin Alleles Are Not Associated with Susceptibility to or Outcome of Invasive Pneumococcal Infection in Randomly Included Patients**
Gitte Kronborg, Nina Weis, Hans O. Madsen, Svend S. Pedersen, Christian Wejse, Henrik Nielsen, Peter Skinhøj, and Peter Garred

1521 **Molecular Epidemiology of 3 Putative Virulence Genes for *Escherichia coli* Urinary Tract Infection—*usp*, *iha*, and $iroN_{E.\ coli}$**
Richard J. Bauer, Lixin Zhang, Betsy Foxman, Anja Siitonen, Maria E. Jantunen, Harri Saxen, and Carl F. Marrs

1525 **Gonococcal Cervicitis Is Associated with Reduced Systemic $CD8^+$ T Cell Responses in Human Immunodeficiency Virus Type 1–Infected and Exposed, Uninfected Sex Workers**
Rupert Kaul, Sarah L. Rowland-Jones, Geraldine Gillespie, Joshua Kimani, Tao Dong, Peter Kiama, J. Neil Simonsen, Job J. Bwayo, Andrew J. McMichael, and Francis A. Plummer

1530 **Mutations in the Dihydropteroate Synthase Gene of Human-Derived *Pneumocystis carinii* Isolates from Italy Are Infrequent but Correlate with Prior Sulfa Prophylaxis**
Liang Ma, Joseph A. Kovacs, Antonietta Cargnel, Antonella Valerio, Giovanna Fantoni, and Chiara Atzori

1533 **Relapses versus Reinfections in Patients Coinfected with *Leishmania infantum* and Human Immunodeficiency Virus Type 1**
Miguel A. Morales, Israel Cruz, Jose M. Rubio, Carmen Chicharro, Carmen Cañavate, Fernando Laguna, and Jorge Alvar

1538 **Central Role of the Spleen in Malaria Parasite Clearance**
Kesinee Chotivanich, Rachanee Udomsangpetch, Rose McGready, Stephane Proux, Paul Newton, Sasithon Pukrittayakamee, Sornchai Looareesuwan, and Nicholas J. White

CORRESPONDENCE

1542 **Carriage of Antibiotic-Resistant Fecal Bacteria in Nepal**
Prajwol P. Joshi

1542 **Reply**
Stuart B. Levy

1542 **Reply to Katti (J Infect Dis 2001; 184:1497–8)**
Martin E. Munk

1544 **Errata**

Volume 185 · Supplement 2 **15 May 2002**

S103 **Introduction: The Importance of Identifying and Treating Complications of Human Immunodeficiency Virus Disease**
Paul Volberding and Patrick Sullivan

S105 **Biology of Anemia, Differential Diagnosis, and Treatment Options in Human Immunodeficiency Virus Infection**
Susan Claster

S110 **The Impact of Anemia on Quality of Life in Human Immunodeficiency Virus–Infected Patients**
Paul Volberding

S115 **Immune Therapy: Non–Highly Active Antiretroviral Therapy Management of Human Immunodeficiency Virus–Infected Patients**
Ronald Mitsuyasu

S123 **Selected Metabolic and Morphologic Complications Associated with Highly Active Antiretroviral Therapy**
Kimberly Y. Smith

S128 **Treatment of Hepatitis C and Anemia in Human Immunodeficiency Virus–Infected Patients**
Douglas T. Dieterich

S138 **Associations of Anemia, Treatments for Anemia, and Survival in Patients with Human Immunodeficiency Virus Infection**
Patrick Sullivan

S143 **Adherence to Antiretroviral Therapy by Human Immunodeficiency Virus–Infected Patients**
Barbara J. Turner

Volume 185 · Number 11 **1 June 2002**

MAJOR ARTICLES

1545 **Associations between Human Leukocyte Antigen Homozygosity and Antibody Levels to Measles Vaccine**
Jennifer L. St. Sauver, Inna G. Ovsyannikova, Robert M. Jacobson, Steven J. Jacobsen, Robert A. Vierkant, Daniel J. Schaid, V. Shane Pankratz, Erin M. Green, and Gregory A. Poland

1550 **Maternal Immunization with a Herpes Simplex Virus Type 2 Replication-Defective Virus Reduces Visceral Dissemination but Not Lethal Encephalitis in Newborn Mice after Oral Challenge**
Ingrid A. C. Evans and Cheryl A. Jones

1561 **The Replication of Human Immunodeficiency Virus Type 1 in Macrophages Is Enhanced after Phagocytosis of Apoptotic Cells**
Rosangela G. Lima, Johan Van Weyenbergh, Elvira M. B. Saraiva, Manoel Barral-Netto, Bernardo Galvão-Castro, and Dumith Chequer Bou-Habib

1567 **Increased CD4 and CCR5 Expression and Human Immunodeficiency Virus Type 1 Entry in CD40 Ligand–Stimulated Macrophages**
Alberto Bergamini, Francesca Bolacchi, Caterina Delfina Pesce, Marica Carbone, Mario Cepparulo, Flavio Demin, and Giovanni Rocchi

1578 Association between Larger Thymic Size and Higher Thymic Output in Human Immunodeficiency Virus–Infected Patients Receiving Highly Active Antiretroviral Therapy
Lilian Kolte, Anne-Mette Dreves, Annette K. Ersbøll, Charlotte Strandberg, Dorthe L. Jeppesen, Jens O. Nielsen, Lars P. Ryder, and Susanne D. Nielsen

1586 A Comparison of Group A Streptococci from Invasive and Uncomplicated Infections: Are Virulent Clones Responsible for Serious Streptococcal Infections?
Dwight R. Johnson, Jason T. Wotton, Anita Shet, and Edward L. Kaplan

1596 Outbreak of W135 Meningococcal Disease in 2000: Not Emergence of a New W135 Strain but Clonal Expansion within the Electophoretic Type–37 Complex
Leonard W. Mayer, Michael W. Reeves, Nasser Al-Hamdan, Claudio T. Sacchi, Muhamed-Kheir Taha, Gloria W. Ajello, Susanna E. Schmink, Corie A. Noble, Maria Lucia C. Tondella, Anne M. Whitney, Yagoub Al-Mazrou, Mohammed Al-Jefri, Amin Mishkhis, Sameer Sabban, Dominique A. Caugant, Jairam Lingappa, Nancy E. Rosenstein, and Tanja Popovic

1606 Effect of Menstrual Status on Antibacterial Activity and Secretory Leukocyte Protease Inhibitor Production by Human Uterine Epithelial Cells in Culture
John V. Fahey and Charles R. Wira

1614 Correlation of Local Interleukin-8 with Immunoglobulin A against *Gardnerella vaginalis* Hemolysin and with Prolidase and Sialidase Levels in Women with Bacterial Vaginosis
Sabina Cauci, Secondo Guaschino, Silvia Driussi, Davide De Santo, Paolo Lanzafame, and Franco Quadrifoglio

1621 *Chlamydia pneumoniae* Infection of Endothelial Cells Induces Transcriptional Activation of Platelet-Derived Growth Factor–B: A Potential Link to Intimal Thickening in a Rabbit Model of Atherosclerosis
Brian K. Coombes, Brian Chiu, Ignatius W. Fong, and James B. Mahony

1631 Effect of Macrolide Antibiotics on Human Endothelial Cells Activated by *Chlamydia pneumoniae* Infection and Tumor Necrosis Factor–α
Silvia M. Uriarte, Robert E. Molestina, Richard D. Miller, Jorge Bernabo, Alicia Farinati, Kumiko Eiguchi, Julio A. Ramirez, and James T. Summersgill

1637 The Molecular Basis of Sulfonamide Resistance in *Toxoplasma gondii* and Implications for the Clinical Management of Toxoplasmosis
Tanya V. Aspinall, David H. M. Joynson, Edward Guy, John E. Hyde, and Paul F. G. Sims

1644 Population-Based Differences in *Schistosoma mansoni*– and Hepatitis C–Induced Disease
Ronald E. Blanton, Ekram Abdel Salam, H. Curtis Kariuki, Philip Magak, Luciano K. Silva, Eric M. Muchiri, Fredrick Thiongo, Iman E. Abdel-Meghid, Anthony E. Butterworth, Mitermayer G. Reis, and John H. Ouma

1650 Soluble Egg Antigens from *Schistosoma mansoni* Induce Angiogenesis-Related Processes by Up-Regulating Vascular Endothelial Growth Factor in Human Endothelial Cells
David A. Loeffler, Steven K. Lundy, Kameshwar P. Singh, Herve C. Gerard, Alan P. Hudson, and Dov L. Boros

CONCISE COMMUNICATIONS

1657 Primary Induction of Human $CD8^+$ Cytotoxic T Lymphocytes and Interferon-γ–Producing T Cells after Smallpox Vaccination
Francis A. Ennis, John Cruz, Walter E. Demkowicz, Jr., Alan L. Rothman, and David J. McClain

1660 Characterization of Human Metapneumoviruses Isolated from Patients in North America
Teresa C. T. Peret, Guy Boivin, Yan Li, Michel Couillard, Charles Humphrey, Albert D. M. E. Osterhaus, Dean D. Erdman, and Larry J. Anderson

1664 Human Papillomavirus DNA Is Found in the Vas Deferens
Marjut A. M. Rintala, Pasi P. Pöllänen, Vesa P. Nikkanen, Seija E. Grénman, and Stina M. Syrjänen

1668 Relative Infectivity of Hepatitis A Virus by the Oral and Intravenous Routes in 2 Species of Nonhuman Primates
Robert H. Purcell, Doris C. Wong, and Max Shapiro

1672 Relationship between the Size of the Human Immunodeficiency Virus Type 1 (HIV-1) Reservoir in Peripheral Blood $CD4^+$ T Cells and $CD4^+$:$CD8^+$ T Cell Ratios in Aviremic HIV-1–Infected Individuals Receiving Long-Term Highly Active Antiretroviral Therapy
Tae-Wook Chun, J. Shawn Justement, Punita Pandya, Claire W. Hallahan, Mary McLaughlin, Shuying Liu, Linda A. Ehler, Colin Kovacs, and Anthony S. Fauci

1677 **Maternal Antibody against Toxic Shock Syndrome Toxin–1 May Protect Infants Younger than 6 Months of Age from Developing Kawasaki Syndrome**
Yuichi Nomura, Masao Yoshinaga, Kiminori Masuda, Syuji Takei, and Koichiro Miyata

1681 **Natural History of Enteroaggregative and Enterotoxigenic *Escherichia coli* Infection among US Travelers to Guadalajara, Mexico**
Javier A. Adachi, Charles D. Ericsson, Zhi-Dong Jiang, Margaret W. DuPont, Sanjay R. Pallegar, and Herbert L. DuPont

1684 ***IFNGR1* Gene Promoter Polymorphisms and Susceptibility to Cerebral Malaria**
Oliver Koch, Agnes Awomoyi, Stanley Usen, Muminatou Jallow, Anna Richardson, Jeremy Hull, Margaret Pinder, Melanie Newport, and Dominic Kwiatkowski

1688 ***Plasmodium falciparum* Infections Are Associated with Agglutinating Antibodies to Parasite-Infected Erythrocyte Surface Antigens among Healthy Kenyan Children**
Peter C. Bull, Brett S. Lowe, Ngumbao Kaleli, Fixton Njuga, Moses Kortok, Amanda Ross, Francis Ndungu, Robert W. Snow, and Kevin Marsh

CORRESPONDENCE

1692 **Nitazoxanide as a Broad-Spectrum Antiparasitic Agent**
Subhash C. Arya

1692 **Human Immunodeficiency Virus Protease Inhibitors and *Pneumocystis carinii***
Chiara Atzori and Antonietta Cargnel

1693 **Reply**
Peter D. Walzer and Melanie T. Cushion

1695 **Notices**

1696 **Errata**

Volume 185 · Number 12 **15 June 2002**

MAJOR ARTICLES

1697 **Dengue-Specific T Cell Responses in Peripheral Blood Mononuclear Cells Obtained prior to Secondary Dengue Virus Infections in Thai Schoolchildren**
Marlou M. Mangada, Timothy P. Endy, Ananda Nisalak, Supamit Chunsuttiwat, David W. Vaughn, Daniel H. Libraty, Sharone Green, Francis A. Ennis, and Alan L. Rothman

1704 **Chemokine-Induced Leishmanicidal Activity in Murine Macrophages via the Generation of Nitric Oxide**
Sandip Bhattacharyya, Sanjukta Ghosh, Biplab Dasgupta, Debashis Mazumder, Syamal Roy, and Subrata Majumdar

1709 **Cytomegalovirus (CMV) Phosphoprotein 65 Makes a Large Contribution to Shaping the T Cell Repertoire in CMV-Exposed Individuals**
Florian Kern, Torsten Bunde, Nicole Faulhaber, Felix Kiecker, Elham Khatamzas, Ina-Maria Rudawski, Axel Pruss, Jan-Willem Gratama, Rudolf Volkmer-Engert, Ralf Ewert, Petra Reinke, Hans-Dieter Volk, and Louis J. Picker

1717 **Cytomegalovirus (CMV) Polymerase Chain Reaction Profiles in Individuals with Advanced Human Immunodeficiency Virus Infection: Relationship to CMV Disease**
Mostafa A. Nokta, Fiona Holland, Victor De Gruttola, Vincent C. Emery, Mark A. Jacobson, Paul Griffiths, Richard B. Pollard, and Judith E. Feinberg, for the AIDS Clinical Trials Group, Protocol 204/GlaxoWellcome 123-014, International CMV Prophylaxis Study Group

1723 **Human Cytomegalovirus (HCMV) Replication Dynamics in HCMV-Naive and -Experienced Immunocompromised Hosts**
Vincent C. Emery, Aycan F. Hassan-Walker, Andrew K. Burroughs, and Paul D. Griffiths

1729 **Discordance at Human Leukocyte Antigen–DRB3 and Protection from Human Immunodeficiency Virus Type 1 Transmission**
Shannon L. Hader, Thomas W. Hodge, Kate A. Buchacz, Robert A. Bray, Nancy S. Padian, Alfio Rausa, Sally A. Slaviniski, and Scott D. Holmberg

1736 **Elevated Virus Loads of Kaposi's Sarcoma–Associated Human Herpesvirus 8 Predict Kaposi's Sarcoma Disease Progression, but Elevated Levels of Human Immunodeficiency Virus Type 1 Do Not**
E. Byrd Quinlivan, Chuan Zhang, Paul W. Stewart, Chulaluk Komoltri, Michelle G. Davis, and Robert S. Wehbie

1745 **Group B Streptococcal β-Hemolysin Induces Mortality and Liver Injury in Experimental Sepsis**
Axel Ring, Johann S. Braun, Jürgen Pohl, Victor Nizet, Wolfgang Stremmel, and Jerry L. Shenep

1754 **Humanlike Immune Response of Human Leukocyte Antigen–DR3 Transgenic Mice to Staphylococcal Enterotoxins: A Novel Model for Superantigen Vaccines**
Luis DaSilva, Brent C. Welcher, Robert G. Ulrich, M. Javad Aman, Chella S. David, and Sina Bavari

1761 **Prospective Study of Infective Endocarditis among Injection Drug Users**
Lucy E. Wilson, David L. Thomas, Jacqueline Astemborski, Terri L. Freedman, and David Vlahov

1767 **Bactericidal Group IIA Phospholipase A2 in Serum of Patients with Bacterial Infections**
Juha O. Grönroos, Veli J. O. Laine, and Timo J. Nevalainen

1773 **Human Phagocytic Cells in the Early Innate Immune Response to *Borrelia burgdorferi***
Ruth R. Montgomery, Denise Lusitani, Anne de Boisfleury Chevance, and Stephen E. Malawista

1780 **Cytokine and Chemokine Gene Expression after Primary and Secondary Respiratory Syncytial Virus Infection in Cotton Rats**
Jorge C. G. Blanco, Joann Y. Richardson, Miriam E. R. Darnell, Anne Rowzee, Lioubov Pletneva, David D. Porter, and Gregory A. Prince

1786 ***Onchocerca volvulus* Microfilariae Avoid Complement Attack by Direct Binding of Factor H**
Taru Meri, T. Sakari Jokiranta, Jens Hellwage, Alexandra Bialonski, Peter F. Zipfel, and Seppo Meri

1794 **Identification and Characterization of 3 Novel Genital Human Papillomaviruses by Overlapping Polymerase Chain Reaction: *cand*HPV89, *cand*HPV90, and *cand*HPV91**
Masanori Terai and Robert D. Burk

CONCISE COMMUNICATIONS

1798 **Evaluation of Coxsackievirus Infection in Children with Human Immunodeficiency Virus Type 1–Associated Cardiomyopathy**
Hal B. Jenson, Charles J. Gauntt, Kirk A. Easley, Jane Pitt, Steven E. Lipshultz, Kenneth McIntosh, and William T. Shearer, for the Pediatric Pulmonary and Cardiovascular Complications of HIV-1 Infection Study Group

1803 **Reduced CC Chemokine Receptor (CCR) 1 and CCR5 Surface Expression on Peripheral Blood T Lymphocytes from Patients with Chronic Hepatitis C Infection**
Mathias Lichterfeld, Ludger Leifeld, Hans Dieter Nischalke, Jürgen K. Rockstroh, Lothar Heß, Tilman Sauerbruch, and Ulrich Spengler

1808 **Risk Factors for Human Herpesvirus 8 Infection in a Cohort of Drug Users in The Netherlands, 1985–1996**
Neil Renwick, Nicole H. T. M. Dukers, Gerrit Jan Weverling, Julie A. Sheldon, Thomas F. Schulz, Maria Prins, Roel A. Coutinho, and Jaap Goudsmit

1813 **Cytomegalovirus (CMV) Retinitis Immune Restoration Disease Occurs during Highly Active Antiretroviral Therapy–Induced Restoration of CMV-Specific Immune Responses within a Predominant Th2 Cytokine Environment**
Shelley F. Stone, Patricia Price, Mei-Ling Tay-Kearney, and Martyn A. French

1818 **Evaluation of Initial $CD4^+$ T Cell Counts in Individuals with Newly Diagnosed Human Immunodeficiency Virus Infection, by Sex and Race, in Urban Settings**
Mark Dybul, Robert Bolan, David Condoluci, Roxane Cox-Iyamu, Robert Redfield, Claire W. Hallahan, Marlene Folino, Kunthavi Sathasivam, Monica Weisberg, Maryann Andrews, Bertha Hidalgo, Joshua Vasquez, and Anthony S. Fauci

1822 **A Prospective Study of Hormonal Contraceptive Use and Cervical Shedding of Herpes Simplex Virus in Human Immunodeficiency Virus Type 1–Seropositive Women**
R. Scott McClelland, Chia C. Wang, Barbra A. Richardson, Lawrence Corey, Rhoda L. Ashley, Kishorchandra Mandaliya, Jeckoniah Ndinya-Achola, Job J. Bwayo, and Joan K. Kreiss

1826 **Morphine Promotes Simian Acquired Immunodeficiency Syndrome Virus Replication in Monkey Peripheral Mononuclear Cells: Induction of CC Chemokine Receptor 5 Expression for Virus Entry**
Shunji Suzuki, Ann J. Chuang, Linda F. Chuang, Roy H. Doi, and Ronald Y. Chuang

1830 **Antifungal Therapy for Central Nervous System Histoplasmosis, Using a Newly Developed Intracranial Model of Infection**
Ross R. Haynes, Patricia A. Connolly, Michelle M. Durkin, Ann M. LeMonte, Melinda L. Smedema, Edward Brizendine, and L. Joseph Wheat

1833 **Critical Role of Myeloperoxidase and Nicotinamide Adenine Dinucleotide Phosphate–Oxidase in High-Burden Systemic Infection of Mice with *Candida albicans***
Yasuaki Aratani, Fumiaki Kura, Haruo Watanabe, Hisayoshi Akagawa, Yukie Takano, Kazuo Suzuki, Mary C. Dinauer, Nobuyo Maeda, and Hideki Koyama

1838 **Dynamics of Gametocytes among *Plasmodium falciparum* Clones in Natural Infections in an Area of Highly Seasonal Transmission**
Amel Abdel-Wahab, Abdel-Muhsin A. Abdel-Muhsin, Eltayeb Ali, Suad Suleiman, Salah Ahmed, David Walliker, and Hamza A. Babiker

CORRESPONDENCE

1843 **Reactivation of Human Herpesvirus 6 Infection in an Immunocompetent Host with Chronic Encephalopathy**
Carla Arpino, Luisa Lopez, Gianfranco Anzidei, Maria Pia Camporiondo, Debora Poveromo, and Paolo Curatolo

1843 **Reply**
Raymund R. Razonable and Carlos V. Paya

1844 **Impact of Protease Polymorphisms and Viral Fitness on Human Immunodeficiency Virus (HIV) Type 1 Viremia in Untreated HIV-1 Infection**
Yvonne Märki, Gilbert R. Kaufmann, Manuel Battegay, and Thomas Klimkait, for the Swiss HIV Cohort Study

1846 **Identification of the *Cryptosporidium* Pig Genotype in a Human Patient**
Lihua Xiao, Caryn Bern, Michael Arrowood, Irshad Sulaiman, Ling Zhou, Vivian Kawai, Aldo Vivar, Altaf A. Lal, and Robert H. Gilman

1849 **Reviewers of Volume 185**

Volume Contents